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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Chong-Jin Oon, Wei-Ning Chen, Ai-Lin Leong and Shiuan Koh

Serial No.: 09/362,394

Filed : July 28, 1999

For : DETECTION OF HUMAN HEPATITIS B VIRUS SURFACE ANTIGEN MUTANTS BY SPECIFIC AMPLIFICATION AND ITS APPLICATION ON GENE CHIP

1185 Avenue of the Americas  
New York, New York 10036  
April 20, 2000

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants direct the Examiner's attention to the following references which are listed on the PTO-1449 form attached hereto as **Exhibit A**. Copies of these references are attached hereto as **Exhibits 1-15** respectively.

1. Carman, W.F., et al. "Hepatitis B virus envelope variation after transplantation with and without hepatitis B immune globulin prophylaxis", Hepatology (1996), vol. 24, pp. 489-493. (Exhibit 1)
2. Goffeau, A., "Molecular fish on chips", Nature (1997), vol. 385, pp. 202-203. (Exhibit 2)
3. Guo. Z., et al. "Direct fluorescence analysis of genetic polymorphisms by hybridization with oligonucleotide arrays on glass supports", Nucl. Acids Res. (1994), vol. 22, pp. 5456-5465. (Exhibit 3)

Applicants: Chong-Jin Oon, et al.  
Serial No.: 09/362,394  
Filed : July 28, 1999  
Page 2

4. Hoheisel J. Oligomer-chip technology. Trends Biotechnol. (1997), vol. 15, pp. 465-469. (Exhibit 4)
5. Hsu, H.Y., et al. "Surface gene mutants of hepatitis B virus in infants who develop acute or chronic infections despite immunoprophylaxis", Hepatology (1997), vol. 26, pp. 786-791. (Exhibit 5)
6. Marshall A. and Hodgson J. "DNA chips: an array of possibilities." Nat. Biotechnol. (1998), vol. 16, pp. 27-31. (Exhibit 6)
7. Ogata, N., et al. "Infectivity and pathogenicity in chimpanzees of a surface gene mutant of hepatitis B virus that emerged in a vaccinated infant", J. Infect. Dis. (1997), vol. 175, pp. 511-523. (Exhibit 7)
8. Oon, C.J. and Chen, W.N. "Current aspects of hepatitis B virus surface antigen mutants in Singapore. J. Viral. Hepatitis (1998), vol. 5(2), pp. 17-24. (Exhibit 8)
9. Oon, C.J., Chen, W.N., Koh S., and Lim G.K. "Identification of hepatitis B surface antigen variants with alterations outside the 'a' determinant in immunized Singapore infants." J. Infect. Dis. (1999), vol. 179(1), pp. 259-263. (Exhibit 9)
10. Oon, C.J., Chen, W.N., Zhao Y., Teng S.W. "Detection of hepatitis B virus surface antigen mutants and their integration in human hepatocellular carcinoma." Cancer Letters (1999), vol. 136(1), pp. 95-99. (Exhibit 10)
11. Oon, C.J., Chen W.N., Lim N., Lim G.K., Koh S., Leong A.L., Tan G.S., and Teng S.W. "Hepatitis B virus variants with

Applicants: Chong-Jin Oon, et al.  
Serial No.: 09/362,394  
Filed : July 28, 1999  
Page 3

lamivudine-related mutations in the DNA polymerase and the 'a' epitope of the surface antigen are sensitive to ganciclovir." Antiviral Res. (1999), vol. 41(3), pp. 113-118. (Exhibit 11)

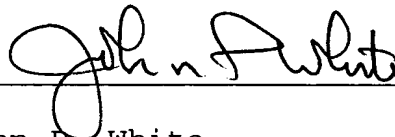
12. Oon, C.J., et al. "Natural history of hepatitis B surface antigen mutants in children", Lancet (1996), vol. 348, pp. 1524-1525. (Exhibit 12)
13. Oon, C.J., et al. "Molecular epidemiology of hepatitis B virus vaccine variants in Singapore", Vaccine (1995), vol. 13, pp. 699-702. (Exhibit 13)
14. Saiki R.K., et. al. "Genetic analysis of amplified DNA with immobilized sequence-specific oligonucleotide probes." Proc. Natl. Acad. USA (1989), vol. 86, pp. 6230-6234. (Exhibit 14)
15. Yershov G., Barsky V. et. al. "DNA analysis and diagnostics on oligonucleotide microchips." Proc. Natl. Acad. Sci. USA (1996), vol. 93, pp. 4913-4918. (Exhibit 15)

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone at the number provided below.

Applicants: Chong-Jin Oon, et al.  
Serial No.: 09/362,394  
Filed : July 28, 1999  
Page 4

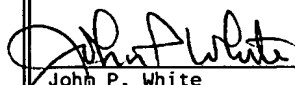
Pursuant to 37 C.F.R. §1.97(b)(3), no fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.



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